

Duplicate.

506.73

VOL. VII, PP. 175-177

DECEMBER 22, 1892

PROCEEDINGS
OF THE
BIOLOGICAL SOCIETY OF WASHINGTON.

THE OCCURRENCE OF COOPER'S LEMMING MOUSE
(*SYNAPTOMYS COOPERI*) IN THE
ATLANTIC STATES.*

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Synaptomys cooperi is one of the rarest of North American mammals. Both genus and species were described and named 35 years ago by Professor Baird in a peculiarly informal way, in some remarks under the genus *Myodes* in his great work on mammals published in 1857 (Pacific R. R. Reports, vol. VIII, 1857, pp. 556-558). The description was based on a very imperfect specimen from an unknown locality, transmitted by Mr. William Cooper, of Hoboken, New Jersey. Of its probable source Professor Baird said: "The animal is undoubtedly North American, probably from the New England states or New York; possibly from Iowa or Minnesota." The type specimen lacked three feet, the tail, and the skin of the head. Another badly damaged skin, lacking both head and skull, accompanied it and may or may not have belonged to the same species.

The next specimen of which we have any record was captured near Brookville, Indiana, in 1866, by Rufus Haymond, and by him transmitted to the Smithsonian, but its identity evidently was not made known until much later, for the species is not mentioned by Haymond in his annotated list of the 'Mammals found at the present time in Franklin County,' Indiana, pub-

* Read at a meeting of the Biological Society of Washington, Nov. 5, 1892.

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lished in 1869 (First Annual Report, Geol. Surv. Indiana, 1869, 203–208).

The first published record after Baird's original description seems to have appeared in 1874 in Coues' 'Synopsis of the Muridæ of North America' (Proc. Acad. Nat. Sci., Phila., 1874, 192–194). In this paper Coues mentioned specimens from Indiana, Illinois, Minnesota, Kansas, Oregon, and Alaska, but it is probable, if not absolutely certain, that those from Oregon and Alaska do not pertain to the species under consideration.

The only locality in which *Synaptomys* has been found in anything like abundance is the neighborhood of Brookville, Indiana, where Mr. Edgar R. Quick and Amos W. Butler have obtained a number of specimens. This, moreover, is the easternmost locality from which any positive record has been published. (See Am. Nat., vol. xix, Feb., 1885, pp. 113–118.)

In April, 1888, Dr. A. K. Fisher, while hunting at Munson Hill, Virginia (only about five miles from the city of Washington), found a number of 'pellets' of the Long-eared owl (*Asio wilsonianus*) under a tree in which one of these owls habitually roosted. In examining these 'pellets,' which were made up almost wholly of the remains of small mammals, I was surprised not only at the large number of individuals and species represented, but also at the discovery among the rest of three more or less perfect skulls of *Synaptomys cooperi*. The total number of skulls found in these pellets was 176, of which 137 were of mice, 26 of shrews, and 13 of birds. The mice and shrews were positively identified as follows:

<i>Arvicola riparius</i>	95
<i>Arvicola pictorum</i>	24
<i>Mus musculus</i>	15
<i>Synaptomys cooperi</i>	3
<i>Blarina exilipes</i>	23
<i>Blarina brevicauda</i>	3
Total.....	163

A year and a half afterward a single skull was taken from the stomach of a Barred owl (*Syrnium nebulosum*) killed at Alfred Center, New York, October 11, 1889, and still later another was found in the stomach of a Red-tailed hawk (*Buteo borealis*) killed at Sandy Spring, Maryland, March 24, 1890. These specimens were exhibited at one of the meetings of the Biological Society,

but publication was deferred in the hope that a specimen of the animal itself might be obtained.

During the past season I had the good fortune to capture two specimens of *Synaptomys* on the summit of Roan Mountain, North Carolina, in traps set for shrews (*Sorex*) and red-backed mice (*Evotomys*). The first of these, an adult male, was caught August 29, 1892, at the mouth of its runway in a bed of dry moss overrun by mountain bluets (*Houstonia serpyllifolia*) in the edge of a grove of balsam firs (*Abies frazeri*). The second specimen, an adult female, was caught September 8 in a wet sphagnum bog near the spring that supplies the Cloudland Hotel with water. Both were taken at an altitude of 1,830 meters (above 6,000 ft.). Before leaving the mountain these specimens were shown to Mr. Elmer R. Edson, a young man temporarily residing there. Mr. Edson promised to set the 'cyclone' traps left with him, in the hope of securing additional specimens, and has been rewarded by the capture of two adults—one in the same sphagnum bog from which my second specimen came, the other in a grove of balsams on the dry summit. In view of the records here published from North Carolina, Virginia, Maryland, and New York, it seems not unlikely that Baird's type really came from the latter State, or possibly even from New Jersey, the State in which the donor of the specimen, Mr. Cooper, lived.

Persons interested in the capture of rare mammals will do well to keep a sharp lookout for this species in the cooler parts of Pennsylvania and New Jersey.